

BARANOV, V.M.; DONSKOY, S.A.; TORSHILOV, Yu.V.; TRET'IAKOV, M.A.; UDOVENKO,
V.G.; FRETENZON, Ye.Z.

Blowing of cast iron in high-capacity converters. Metallurg 10 no.9:
15-18 S '65. (MIRA 18:9)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

GOLOV, G.V.; TRET'YAKOV, M.A.; TORSHILOV, Yu.V.; DONSKOY, S.A.

Conditions for the service of linings of oxygen-blown converters with a capacity of 100-130 tons (Mg) during the conversion of vanadium cast iron. Stal' 25 no.6:537-538 Je '65.

(MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

ARNAUTOV, V.T.; BARANOV, V.M.; DONSKOY, S.A.; PASTUKHOV, A.I.; SMIRNOV, L.A.;
TORSHILOV, Yu.V.; TRET'YAKOV, M.A.; UDOVENKO, V.G.; FREYDENZON, Ye.Z.;
SHCHEKALEV, Yu.S.; Primali uchastiye: MAKAYEV, S.V.; KOMPANIYETS,
G.M.; NAGOVITSYN, D.F.; NOVOLODSKIY, P.I.; VARSHAVSKIY, V.L.;
KOROGODSKIY, V.G.; KLIBANOV, Ye.L.; MEDVEDEVSKIKH, Yu.; TALANTSEVA,
T.I.; DUBROV, N.F.; DZEMYAN, S.K.; TOPYCHKANOV, B.I.; CHARUSHNIKOV,
O.A.; KHARITONOV, Yu.A.

Developing and mastering the technology of converting vanadium
cast iron in oxygen-blown converters with a 100 ton (Mg) capacity.
Stal' 25 no.6:504-508 Je '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat (for Makayev, Kompaniyets, Nagovitsyn, Novolodskiy, Varshavskiy, Korogodskiy, Klibanov, Medvedevskikh, Talantseva). 2. Ural'skiy nauchno-issledovatel'skiy institut chenykh metallov (for Dubrov, Dzemyan, Topychkanov, Charushnikov, Kharitonov).

DONSKOY, S. M.

USSR/Engineering
Electric Power
Industrial Efficiency

Jul 49

"Experiments of Power Sales Administration of
Energo for Eliminating Power Losses,"
S. M. Donskoy, 1 1/2 pp

"From Knerget" No 7

Emphasizes great significance of reducing losses
of material, fuel, and electric power. Electric-
power losses decreased due to measures taken by
Muzn Energostroy: 1946 - 10.80%; 1947 - 9.50%;
1948 - 7.65%. Thus, yearly losses were 0.73%,
lower than planned for 1948. (lowest in 10 years).
64/49739

USSR/Engineering (Contd)

Jul 49

Achieved lower losses principally by introducing
more accurate power-metering methods in all
phases of the network.

64/49739

DONSKOY, S.M.; ZEMSKOV, N.Ya.; OSFNOV, V.I.; POTAPOV, A.I.;
UDALIKHINA, A.S.; YAROSHUK, D.Ya.; VAYNER, M.S.; VERNYI,
Ye.A.; CHURKIN, D.I.; GERASIMOV, K.A.; ZIBRIN, D.A.;
AYKHENVAL'D, Ye.L.; KOZLOV, A.I.; BULANOV, A.G.;
OSTROVSKAYA, L.N.; TAUBES, I.S.; PETROV, Z.I.; POTEPALOV,
V.A.; PECHONYI, A.D.; TROFIMOVA, A.S., tekhn. red.

[Development of power engineering in the Tatar A.S.S.R.]
Razvitie energetiki Tatarskoi ASSR. Kazan', Tatarkoe knizhnoe
izd-vo, 1961. 145 p.
(MIRA 15:2)

1. Tatar A.S.S.R. Sovet Narodnogo khozyaystva. Upravleniye
energeticheskoy promyshlennosti.
(Tatar A.S.S.R.—Power engineering)

1. DONSKEY, V. Eng.
2. USSR (600)
4. Electric Current Rectifiers
7. BB-UI rectifying block. MTS 13 No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

DONSKOY, V.

Cylinder for drying carbon dioxide in fire extinguishers. Pozh.
delc 6 no.1:30 Ja '60. (MIRA 13:5)
(Fire extinction--Chemical system)
(Drying agents)

DONSKOY, V., inzh.; IVANKOV, V., inzh.; RABINOVICH, G.

What floor do you want? Izobr.i rats. no.5:11-12 My '62.
(MIRA 15:5)

1. Institut "Lenzhilproyekt" (for Donskoy, Ivankov).
2. Nachal'nik otdela novoy tekhniki i tipizatsii instituta
"Lenzhilproyekt" (for Rabinovich).
(Elevators)

DONSKOY, V.I.; NAYDIN, Yu.V.

The 18184 special drilling and milling machine. Mashinostroitel'
no.5:12 My '60. (MIRA 14:5)

(Machine tools)

DONSKOY, Viktor Mikhaylovich; LANTSOV, Vladimir Anatol'yevich;
LEVCHENKO, Ya.V., red.; GRANOVSKAYA, G.V., red. izd-va;
BELOGUROVA, I.A., tekhn. red.

[Mechanization of small-volume earthwork] Mekhanizatsiya
zemlianykh rabot malykh ob'emov. Leningrad, 1962. 32 p.
(Leningradskii dcm nauchno-tekhnicheskoi propagandy. Otkrytye
peredovym opytom. Seriya: Stroitel'naya promyshlennost',
no.13) (MIRA 15:11)

(Earthmoving machinery)

DONSKOY, Viktor Mikhaylovich; LANTSOV, Vladimir Anatol'yevich;
LEVCHENKO, Ya.V., red.; FREGER, D.P., red.izd-va;
BELOGUROVA, I.A., tekhn. red.

[Small loading and unloading construction machinery] Malo-
gabaritnye pogruzochno-rasgruzochnye mashiny v stroitel'stve.
Leningrad, 1963. 33 p. (Leningradskii dom nauchno-tekhnicheskoi
propagandy. Obmen peredovym opytom. Seriya: Stroitel'noe
proizvodstvo, no.2) (MIRA 16:10)
(Construction equipment)

DONSKOY, V.N.; LUBINETS, V.K.; GETMANTSEVA, M.I.

Effectiveness of the over-all treatment of chronic diseases of the liver and biliary tract at the Karlovy Vary Health Resort in Czechoslovakia. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.1:35-40 '61. (MIRA 14:5)

1. Iz klinicheskogo sanatoriya Ministerstva zdravookhraneniya SSSR (glavnyy vrach K.D.Timan'kov).

(KARLOVY VARY (CZECHOSLOVAKIA)—MINERAL WATERS)
(LIVER—DISEASES) (BILIARY TRACT—DISEASES)

ANDREYEV, Nikolay Petrovich, inzh.; DUBROVSKIY, Aleksandr Ivanovich, inzh.; FAYNSHTEYN, Iosif Samuilovich, inzh.; AKIMOV, I.S., inzh., retsenzent; MITROFANOV, Yu.M., inzh., retsenzent; DONSKOY, V.P., inzh., retsenzent; KARAMYSHEV, I.A., inzh., red.; KHITROVA, N.A., tekhn. red.

[Handbook on the construction of engineering structures]
Spravochnik po postroike iskusstvennykh sooruzhenii. Izd.2.,
dop. i perer. Moskva, Transzheldorizdat, 1962. 511 p.
(MIRA 15:12)

(Railroad bridges)

(Culverts)

DONSKOY, V.Z., inzh.

Nature of the first exothermic effect upon the thermogram of
Cambrian clay. Stek. 1 ker. 20 no.9:24-26 S '63.

(MIRA 17:6)

1. Obukhovskiy domostroitel'nyy kombinat.

KOCHAN, V.A.; STRONSKIY, L.N.; DONSKOY, Ya.G.; CHERNOV, A.M.

The new UPL-60 universal d.c. potentiometer. Izv.tekh.
no.7:39-41 J1 '60. (MIRA 13:7)
(Potentiometer)

KONDRAT'YEV, Nikolay Fedorovich; MIKHAYLIK, Aleksey Fedoseyevich;
DONSKOY, Ya.Ye., red.; LIMANOVA, M.I., tekhn. red.

[Kharkov in the seven-year plan] Khar'kov v semiletke. Khar'kov,
Khar'kovskoe knizhnoe izd-vo, 1961. 112 p. (MIRA 15:1)
(Kharkov—Economic policy)

CHMIL', Varvara Ivanovna, Geroy sotsialisticheskogo truda; DONS'KOY,
Ya.Yu., red.; SHEVCHENKO, M.G. [Shevchenko, M.H.], tekhn. red.

[The work and the peoper of one shift] Dlia i liudy odniei
minuty. Kharkiv, Kharkivs'ke knyzhkove vyd-vo, 1961. 19 p.
(MIRA 15:1)

1. Master pervogo traktornogo tsakha Kharkovskogo traktornogo
zavoda (for Chmil').

(Labor and laboring classes)

Densko, Ya. Ye

KISLYAKOV, K.S., laureat Stalinskoy premii; tokar'; PETUSHKO, P.I., inzhener;
~~DENSKOY, Ya.~~ redaktor; KUCHERENKIY, I., tekhnicheskiy redaktor.

[Entire brigades of excellent workers] Skvoznye brigady otlichnogo
kachestva. [Kharkov] Khar'kovskoe knizhno-gazetnoe izd-vo, 1952.
36 p. (MLA 8:2)

1. Khar'kovskiy turbogeneratornyy zavod imeni S.M.Kirova (for Kislya-
kov).

(Kharkov--Turbines)

KUZNETSOV, D.I., inzh. VERBOVSKIY, G.G., prof., red.; ~~DONSKOY, Ya., red.~~;
KUCHERSKIY, I., tekhn. red.

[Maximum utilization of tools] Mnogokratnoe ispol'zovanie instru-
menta. Pod red. G.G. Verbovskogo. [Khar'kov] Khar'kovskoe knizhno-
gazetnoe izd-vo, 1952. 66 p. (MIRA 11:9)

1. Khar'kovskiy traktorny savod (for Kuznetsov).
(Cutting tools)

KOPTEV, V.V., slesar'-instrumental'shchik, laureat Stalinskoy premii;
VOBOB'YEV, S.A., kandidat tekhnicheskikh nauk, redaktor; DONSKOY,
Ya., redaktor; LADNYY, Yu., tekhnicheskii redaktor.

[Innovations in the work of machinist and tool maker] Novoe v rabote
slesaria-instrumental'shchika. Pod red. S.A. Vorob'eva. Khar'kov,
Khar'kovskoe knizhno-gazetnoe izd-vo, 1953. 55 p. (MIRA 9:4)
[Microfilm]

1. Khar'kovskiy elektromekhanicheskiy zavod imeni Stalina (for Koptev).
(Machine tools)

SKUBNEVSKIY, A.I.; KOSTYUKOV, Ya.Kh., professor, doktor tekhnicheskikh nauk,
redaktor; DOMSKOY, Ya., redaktor; LADNYY, Yu., tekhnicheskij redaktor.

[At high speeds] Na vysokikh skorostiakh. Pod red. IA.Kh.Kostiukova.
[Khar'kov] Khar'kovskoe knizhno-gazetnoe izd-vo, 1953. 79 p.

(MIRA 8:2)

1. Nachal'nik eksperimental'nogo tsekha Khar'kovskogo velosavoda
(for Skubnevskiy).
(Turning)

KHIMERIK, O.V.; DONS'KOY, Ya., redaktor; LADNIY, Yu., tekhnicheskii redaktor.

[On a sharp rise] Na krutomu pidnesenni. [Kharkiv] Kharkivd'ke knyshkovo-gazetne vyd-vo, 1954. 65 p. (MLB 8:2)

1. Starshiy mayster Kharkivs'koi 1-oï derzhavnoi panchishnoi fabriki (for Khimerik).
(Kharkov--Hosiery industry)

DONSKOY, Ya. Ye., redaktor; LADNYY, Yu. N., tekhnicheskiy redaktor.

[Fraternal friendship; accounts by production leaders on the effective collaboration of units from machinery factories in Moscow, Leningrad, Stalingrad, and Kharkov] Bratskaia druzhba; rasskazy peredovikov proizvodstva o tvorcheskom sodruzhestve kollektivov mashinostroitel'nykh zavodov Moskvy, Leningrada, Stalingrada, Khar'kova. Khar'kov, Obl. knizhno-gazetnoe izd-vo, 1954. 132 p. [Microfilm] (MLRA 8:2)
(Machinery industry)

REMENNAYA, Z.S.; DONSKOY, Ya. Ye., redaktor; SHEVCHENKO, M.G., tekhnicheskiy redaktor.

[More attractive clothing of good quality] Bol'she krasivoi i dobrotnoi odeshdy. Khar'kov, Khar'kovskoe oblastnoe izd-vo, 1955. 43 p.
(MIRA 9:5)

1. Nachal'nik tsukha no.1 Khar'kovskoy shveytsnoy fabriki imeni Tityakova. (for Remennaya).

(Clothing industry)

SOICH, O.V.; VOROB'YEV, S.A., kandidat tekhnicheskikh nauk, redaktor;
DOMSKOY, Ya. Ya., redaktor; SHEVCHENKO, M.G., tekhnicheskii
redaktor

[The struggle for high work productivity] V bor'be za vysokuiu
proizvoditel'nost' truda. [Khar'kov] Khar'kovskoe obl. izd-vo,
1955. 81 p. (MLBA 9:2)

1. Direktor Khar'kovskogo podshipnikovogo zavoda (for Soich)
(Efficiency, Industrial)

SHVIDENKO, V.I.; LEBEDEV, Yu.M., professor, redaktor; DOBROV, Ya.Ye.,
redaktor; ZAMAKHOVSKIY, L.S., tekhnicheskiy redaktor;

[Complex mechanization of construction work] Kompleksnaya
mekhanizatsiya stroitel'nykh rabot. [Khar'kov] Khar'kovskoe
obl. otd-nie, 1955. 84 p. (MIRA 9:2)
(Construction industry)

VOROB'YEV, S.A., kandidat tekhnicheskikh nauk; DONSKOY, Ya.Ye., redaktor;
ZAMAKHOVSKIY, L.S., tekhnicheskij redaktor ~~pererabotannyy~~

[Ways of reducing work time in machine operation] Puti sokrashche-
niia vspomogatel'nogo vremeni [Khar'kov] Khar'kovskoe obl. izd-vo,
1955. 111 p. (MLRA 9:1)

(Efficiency, Industrial)

Donskoy, Ya Ye.

DROKIN, V.D.; KHUKHERIY, A.A.; KOSTYUKOV, Ya. Kh., professor, doktor tekhnicheskikh nauk; redaktor; DONSKOY, Ya. Ye., redaktor; SHIVCHENKO, M.G., tekhnicheskii redaktor

[Perfecting the technology of finishing large machine parts] So-
vershenstvovanie tekhnologii obrabotki krupnykh detalei.
[Khar'kov] Khar'kovskoe obl. izd-vo, 1955. 113 p. (MIRA 9:3)
(Machinery--Construction)

GORDIYENKO, B., starshiy inzhener; DOESKOY, Ya.Ye., red.; SHUBIN, Ye.V.,
tekhn. red.

[Machinist A. Zaslavskii's personal plan] Mikhnyi plan slesaria
A. Zaslavskogo. [Khar'kov] Khar'kovskoe obl. izd-vo, 1956. 9 p.
(MIRA 11:9)

1. Pervyy instrumental'nyy tsekh Khar'kovskogo elektromekhanicheskogo
zavoda (for Gordiyenko).

(Zaslavskii, Aleksandr Vladimirovich)
(Machine-shop practice)

Donskoy, Ya. Ye

DIKAN', V.P., tokar'; PETROV, A.D., konsul'tant-inzh.; DONSKOY, Ya.Ye., red.;
SHEVCHENKO, M.G., tekhn. red.

[By using internal resources] Za schet vnutrennikh rezervov.
[Khar'kov] Khar'kovskoe obl. izd-vo, 1956. 79 p. (MIRA 11:7)

1. Khar'kovskiy traktornyiy zavod imeni Ordzhonikidze (for Dikan',
Petrov). 2. Deputat Verkhovnogo Soveta SSSR (for Dikan').
(Kharkov--Tractor industry)

February 1956
SEMKO, M.F., professor; ANDREYEV, G.Ya., kandidat tekhnicheskikh nauk,
nauchnyy redaktor; DONSKOY, Ya.Ye., redaktor; SHEVCHENKO, M.G.,
tekhnicheskij redaktor

[Metal cutting with mineral-ceramic cutting tools] Rezanie metallov
mineralokeramicheskimi instrumentami. [Khar'kov] Khar'kovskoe obl.
izd-vo, 1956. 90 p. (MLRA 10:1)
(Metal cutting)

Donskoy, Ya. Ye.

NOVIK, A.A., kandidat tekhnicheskikh nauk; NOSKOV, B.A., kandidat tekhnicheskikh nauk, nauchnyy redaktor; ~~DONSKOY, Ya. Ye.~~ redaktor; SHUBIN, Ye.V., tekhnicheskiy redaktor

[The central factory laboratory] Tsentral'naya zavodskaya laboratoriya. [Khar'kov] Khar'kovskoe obl. izd-vo, 1956. 82 p. (MLRA 10:1)

1. Zamestitel' nachal'nika tsentral'noy zavodskoy laboratorii Khar'kovskogo zavoda transportnogo mashinostroyeniya. (for Novik)
(Engineering laboratories)

OKLADNOY, G.M.; DONSKOY, Ya.Ye., red.; SHEVCHENKO, M.G., tekhn.red.

[Rise in the cultural and technical level of the laboring class]
Pod'em kul'turno-tekhnicheskogo urovnia rabochego klassa. [Khar'kov]
Khar'kovskoe obl. izd-vo, 1957. 229 p. (MIRA 11:4)
(Labor and laboring classes)

VOROB'YEV, S.A., dotsent, kand.tekhn.nauk; DONSKOY, Ya.Ye., red.;
SHEVCHENKO, M.G., tekhn.red.

[New technological processes] Novye tekhnologicheskie
protsessy; sbornik statei. Khar'kov, Khar'kovskoe obl.
izd-vo, 1957. 126 p. (MIRA 12:12)
(Technology)

ZMAGA, P.I.; BULGAKOV, V.A., glavnyy inzh., nauchnyy red.; VOROB'YEV, S.A., dotsent, kand.tekhn.nauk, nauchnyy red.; SHUBENKO-SHUBIN, L.A., glavnyy konstruktor, nauchnyy red.; DONSKOY, Y.Ye., red.; SHKOVCHENKO, M.G., tekhn.red.

[New machines; collection of articles on new machines, motors, and apparatus made at Kharkov enterprises from 1956 to 1958]
Novye mashiny; sbornik statei o novykh mashinakh, motorakh, apparatakh, sozdannykh na kharkovskikh predpriyatiyakh v period 1956-1958 gg. Khar'kovskoe obl.izd-vo, 1958. 226 p.

(MIRA 12:5)

1. Zaveduyushchiy otdelom mashinostroyeniya Khar'kovskogo obkoma Kommunisticheskoy partii Ukrainy (for Zmaga). 2. Khar'kovskiy elektromekhanicheskiy zavod (for Bulgakov). 3. Khar'kovskiy turbinnyy zavod imeni Kirova; chlen-korrespondent Akademii nauk USSR (for Shubenko-Shubin).

(Kharkov--Machinery)

KHMARA, S.M., kand.tekhn.nauk, dotsent, otv.red.; KOPYTOV, V.F., otv.
red.; VESSELMAN, S.G., prof., otv.red.; DONSKOY, Ya.Ye., red.;
ZAMAKHOVSKIY, L.S., tekhn.red.

[Conversion of industrial furnaces and boiler installations to
natural gas] Perevod promyshlennykh pechey i kotel'nykh ustanovok
na prirodnyi gas. Khar'kov, Khar'kovskoe obl.izd-vo, 1958. 233 p.
(MIRA 13:1)

1. Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy pro-
myshlennosti. Khar'kovskoye oblastnoye pravleniye. 2. Chlen-
korrespondent AN USSR (for Kopytov).
(Furnaces)

MEDVEDEV, I.N.; DONSKOY, Ya.Ye., red.; LIMANOVA, M.I., tekhn.red.

[In three years instead of twelve] Za 3 goda vmesto 12 let.
Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1959. 30 p.

(MIRA 13:1)

1. Direktor Khar'kovskogo traktorosbornochnogo zavoda (for
Medvedev).

(Kharkov--Building)

ZMAGA, P.I., inzh., red.; VOROB'YEV, S.A., kand.tekhn.nauk, red.; KUZUBOV, V.I., inzh., red.; LEONOV, A.Ye., dotsent, red.; MALYSH, Yu.I., inzh., red.; PUSTOVALOV, V.I., inzh., red.; SAVCHENKOV, V.A., kand.tekhn.nauk, red.; KHMARA, S.M., kand.tekhn.nauk, red.; DONSKOY, Ya.Ye., red.; LYALYUK, I.P., red.; SHEVCHENKO, M.O., tekhn.red.

[Advanced technology; collection of articles on the introduction of advanced technology in machinery plants of Kharkov] Progressivnaya tekhnologiya; sbornik statei ob opyte vnedreniya progressivnoi tekhnologii na khar'kovskikh mashinostroitel'nykh zavodakh, Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1959. 297 n. (MIRA 13:1)

1. Politekhnicheskiy institut imeni Lenina (for Khmara).
(Kharkov--Machinery industry--Technological innovations)

SHEVCHENKO, N.F., red.; AMELIN, F.S., red.; GRECHKO, V.Ye., red.; ISAYEV, V.I., red.; KUZUBOV, V.I., red.; LIBERMAN, Ye.G., prof., doktor ekonom.nauk, red.; MAKARENKO, V.P., red.; SHCHERBININ, I.F., red.; YARMOLOVICH, O.M., red.; KARDASH, G.I., red.; DONSKOY, Ya.Ye., red.; LIMANOVA, M.I., tekhn.red.

[First and foremost; ways to further increase labor productivity in machinery manufacturing enterprises of Kharkov] Samoe vashnoe, samoe glavnoe; o putiakh dal'nishnego povysheniya proizvoditel'nosti truda na mashinostroitel'nykh predpriyatiyakh Khar'kova. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1960. 205 p.

(MIRA 13:11)

1. Ukraine. Khar'kovskiy gorodskoy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva. 2. Nachal'nik tekhnicheskogo otdela Khar'kovskogo sovmarkhosa (for Kuzubov). 3. Khar'kovskiy inzhenerno-ekonomicheskiy institut (for Liberman).

(Kharkov--Machinery industry--Labor productivity)

SMAGA, P.I., inzh., red.; VOROB'YEV, S.A., kand.tekhn.nauk, red.;
KARLOV, A.A., inzh., red.; KUZUBOV, V.I., inzh., red.;
LEONOV, A.Ye., dotsent, red.; TUPITSYN, A.I., kand.tekhn.nauk,
red.; KHMARA, S.M., kand.tekhn.nauk, red.; DONSKOY, Ya.Ye.,
red.; KARDASH, G.I., red.; LYALYUK, I.P., red.; LYMANOVA, M.I.,
tekhn.red.

[Mechanization and automation; collected articles on the
introduction of mechanization and automation at machinery plants
in Kharkov] Mekhanizatsiya i avtomatizatsiya; sbornik statei
ob opyte vnedreniya mekhanizatsii i avtomatizatsii na Khar'kovskikh
maшинostroitel'nykh zavodakh. Khar'kov, Khar'kovskoe knizhnoe
izd-vo, 1960. 373 p. (MIRA 14:4)
(Kharkov--Machinery industry) (Automation)

VERBA, Prokofiy Ivanovich, kand. ekonom. nauk, dotsent; POKLONSKIY,
B.V., kand. ekon. nauk, nauchmyy red.; DONSKOY, Ya.Ye., red.;
SHEVCHENKO, M.G., tekhn. red.

[Role of credit in the development of the industries of regional
economic councils; based on materials of the Ukrainian S.S.R.]
Rol' kredita v razvitii promyshlennosti sovmarkhozov; na mate-
rialakh Ukrainskoi SSR. Khar'kov, Khar'kovskoe knizhnoe izd-vo ,
1961. 143 p. (MIRA 15:3)
(Ukraine--Credit) (Ukraine--Industries)

BARCH, I.Z., inzh.; KUTOV, E.N., inzh. Prinsipialni uchastiye: KADOCHNIKOVA, G.N., mladshiy nauchnyy sotr.; SAPOZHNIKOVA, G.F., starshiy laborant; BLOKHA, L.A., starshiy laborant; KONYUSHEVSKIY, Ye.I., red.; DONSKOY, Ya.Ye., red.; SHEVCHENKO, M.G., tekhn. red.

[Construction cranes] Stroitel'nye krany; spravochnoe posobie. Pod red. E.I. Konyushevskogo. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1961. 409 p.
(MIRA 15:1)

1. Kharkov. Yuzhnyy nauchno-issledovatel'skiy institut promyshlennogo stroitel'stva. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury USSR (for Konyushevskiy).
(Cranes, derricks, etc.)

MCHEDLOV-PETROSYAN, O.P., prof., doktor tekhn. nauk, red.; DONSKOY, Ya.Ye.,
red.; LIMANOVA, M.I., tekhn. red.

[Large wall blocks and slabs made of local raw materials] Krupnye ste-
novye bloki i paneli na mestnom syr'e. Pod red. O.P.Mchedlova-
Petrosiana. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1961. 233p.

(MIRA 14:11)

1. Kharkov. Yuzhnyy nauchno-issledovatel'skiy institut promyshlennogo
stroitel'stva. 2. Chlen-korrespondent Akademii stroitel'stva i arkhi-
tektury USSR (for Mchedlov-Petrosyan).

(Walls) (Precast concrete construction)

KISLYAKOV, Konstantin Sergeyevich, Geroy Sotsialisticheskogo Truda,
tokar'; DONSKOY, Ya.Ye., red.; LIMANOVA, M.I., tekhn. red.

[Achieved through the work of everyone of us]Trudom kazhdogo iz
nas. Khar'kov, Khar'kovskoe knishnoe izd-vo, 1962. 35 p.

(MIRA 15:11)

1. Khar'kovskiy turbinnyy zavod imeni S.M.Kirova (for Kislaykov).
(Kharkov--Turbines)

MANEVICH, David Romanovich; RUBIN, A.A., kand. ekon. nauk, red.;
DONSKOY, Ya.Ye., red.; SHEVCHENKO, M.G., tekhn. red.

[Reducing production cost is the source for the growth of
the national wealth] Snizhenie sebestoimosti produktsii -
istochnik rosta obshchestvennogo bogatstva. Khar'kov, Khar'kov-
skoe knizhnoe izd-vo, 1961. 40 p. (MIRA 16:7)

1. Nachal'nik planovogo otdela Khar'kovskogo traktornogo zavoda
(for Manevich). (Costs, Industrial)

SHKIL'KO, Grigoriy Yakovlevich; DONSKOY, Ya.Ye., red.; SHEVCHENKO,
M.G., tekhn. red.

[Decrease of metal consumption in machinery designs] Sni-
zhenie metalloemkosti konstruktsii. Khar'kov, Khar'kov-
skoe knizhnoe izd-vo, 1962. 46 p. (MIRA 16:7)

1. Glavnyy konstruktor Khar'kovskogo elektrotekhnicheskogo
zavoda (for Shkil'ko).
(Metals) (Electric equipment industry)

DRUCHENKO, V.A.; TKACHENKO, V.A.; MARCHENKO, N.A., kand. tekhn. nauk,
nauchnyy red.; DONSKOY, Ya.Ye., red.; SHEVCHENKO, M.G.,
tekhn. red.

[Ultrasonics are an asset to industrial production] Ul'tra-
zvuk pomogaet proizvodstvu. Khar'kov, Khar'kovskoe knizhnoe
izd-vo, 1963. 55 p. (MIRA 16:7)
(Ultrasonic waves—Industrial applications)

KLEMANTSO, Valentin Filippovich; SMIRNOV, A.M., kand. tekhn.nauk,
red.; DONSKOY, Ya.Ye., red.; SHEVCHENKO, M.G., tekhn. red.

[Interior decoration painting] Vnutronnie raliarno-
dekorativnye raboty. Khar'kov, Khar'kovskoe knizhnoe izd-vo,
1963. 70 p. (MIRA 16:12)

(Color--Physiological effect)
(House painting)

AMELIN, Fedor Stepanovich; DONSKOY, Ia. Yu. [Dons'koi, Ia. IU.], red.;
SHEVCHENKO, M.G. [Shevchenko, M.H.], tekhn.red.

[Let's carry out our seven-year plan in five years] Semyrichku -
za p'iat' rokiv. Kharkiv, Kharkivs'ke knyzhkove vyd-vo, 1959.
27 p. (MIRA 13:2)

1. Stalevar Kharkivs'kogo traktornogo zavody imeni Ordzhonikidze
(for Amelin).
(Kharkov--Tractor industry)

VERBA, Prokofiy Ivanovich, kand.ekonom.nauk; DONSKOY, Ya.Yu. [Dons'koi, IA.IU.], red.; LIMANOVA, M.I., tekhn.red.

[Local industry and the means of its development] Mistseva
promyslovist' ta dzherela ii rozvytku. Kharkiv, Kharkivs'ke
knyzhkove vyd-vo, 1959. 84 p. (MIRA 13:2)
(Ukraine--Industries)

DONSKOY, Yu.

ZAVALISHIN, P.A.; KHITRUK, M.I.; ZUBAREV, N.G., laureat Stalinskoy premii,
red.; DONSKOY, Yu., red.; LADNYY, Yu., tekhn. red.

[Efficiency promoters and inventors at the Kharkov Tractor Factory]
Ratsionalizatory i izobretateli Khar'kovskogo traktornogo zavoda.
Pod red. N.G. Zubareva. [Khar'kov] Khar'kovskoe knishno-gazetnoe
izd-vo, 1952. 47 p. (MIRA 11:9)

(Kharkov--Tractor industry)

DONSTANTINOVA, V.Ye., kand. tekhn. nauk

Air exchange and additional heat losses in multistoried
residential buildings with various types of ventilation.

Vod. i san. tekhn. no.2:13-18 F '65.

(MIRA 18:4)

DONTH, J.

Chapters from agricultural economy. VI. Working units are not the only measure for evaluating the economic results on collective farms. p. 26.
(Rolnicke Hlasy, Vol. 11, no. 6, June 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (IFAL) LC, Vol. 6, no. 10, October 1957. Uncl.

DONTH, J.

Collective farm accounts which are especially useful for controlling the economical handling of money.

P. 20, (Rolnicke Hlasy) Vol. 10, no. 7, July 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) Vol. 6, No. 11 November 1957

DONTH, L.

The pneumatic transport of concrete.

P. 86 (Mechanisation) Vol. 4, No. 3, MAR. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - VOL. 2, NO. 1, JAN. 1958

DONT#, L., inzh.

Pneumatic transportation of concrete mixes on the construction
sites of Czechoslovakia. Mekh. stroi. 15 no.11:28-32 N '58.
(MIRA 11:12)

(Czechoslovakia--Pneumatic-tube transportation)

(Concrete--Transportation)

CHUDOZILOV, Igor; VESELY, A., inz.; DONTH, L., inz.; STEPANEK, B.,
inz.

Use of overpressure inflated halls in the Czechoslovak building industry. Poz stavby 12 no. 1:42-44 '64.

1. Vyzkumny ustav pozemnich staveb, Prostějov.

DONTOROVICH, ISAAK YEFIMOVICH

Svoistva i obrabotka stalei dlia motorostroenia. Moskva, Oborongiz, 1944.
118 p. illus., diags.

Bibliography: p. 118-119

Properties and processing of steels for motor construction.

DLC: TA478.K6

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of
Congress, 1953.

ZINCULESCU, Gh., ing.; DONTOV-DANU, Gh., ing.

Construction of main natural gas lines in the Netherlands.
Petrol si gaze 16 no.2:101-107 F '65.

DONTSOV, A

USSE/ Electronics - Testing instruments

Card 1/1 Pub. 89 - 12/21

Authors : Izyadchik, V.; Dontsov, A.; and Tseytlin, M.

Title : Crystal triodes in defect searching instruments

Periodical : Radio 8, 13-24, Aug 1955

Abstract : A new crystal triode device for the detection of defects in underground communication lines is described. The individual elements of the searching instrument and the mode of its operation are described. Diagrams.

Institution :

Submitted :

Dmitsov, A.A.

To be submitted for the International Symposium on Macromolecular Chemistry,
Montreal, Canada, 27 Aug. - 2 Sept. 1968.

USSR

UDENSKIY, I. M., Institute of High Molecular
Chemistry, Academy of Sciences USSR, Leningrad,
jointly with ERIKHAY, V. R., and KARPOV, M.,
Dale University, Durham, N.C. - "Elasticity
of cross-linked chain networks" (Group 2)

UDENSKIY, I. M., and KARPOV, M., Moscow
Institute of Fine Chemical Technology, Leningrad, U.S.S.R.
- "Interaction of polyethylene with
solvent" (Group 3-5)

UDENSKIY, I. M., and KARPOV, M., Leningrad,
Institute of Fine Chemical Technology, Leningrad, U.S.S.R.
- "Polymerization of some epoxy
compounds" (Group 3-5)

UDENSKIY, I. M., and KARPOV, M., Leningrad,
Institute of Fine Chemical Technology, Leningrad, U.S.S.R.
- "On the catalytic polymerization
of butadiene" (Group 3-5)

UDENSKIY, I. M., and KARPOV, M., Leningrad,
Institute of Fine Chemical Technology, Leningrad, U.S.S.R.
- "Temperature effect on polymer
retention in dense polymerization by alkali metals"
(Group 3-5)

UDENSKIY, I. M., and KARPOV, M., Leningrad,
Institute of Fine Chemical Technology, Leningrad, U.S.S.R.
- "Study of branching in regular
long-range polymers" (Group 3)

UDENSKIY, I. M., and KARPOV, M., Leningrad,
Institute of Fine Chemical Technology, Leningrad, U.S.S.R.
- "On the catalytic polymerization
of butadiene" (Group 3-5)

UDENSKIY, I. M., and KARPOV, M., Leningrad,
Institute of Fine Chemical Technology, Leningrad, U.S.S.R.
- "On the catalytic polymerization
of butadiene" (Group 3-5)

158060

22744
S/190/61/003/011/016/016
B110/B147

AUTHORS: Dogadkin, B. A., Dontsov, A. A.

TITLE: Reaction of polyethylene with sulfur

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 11, 1961,
1746-1754

TEXT: The results of the reaction of polyethylene (PE) with sulfur are given in the present paper. Nonstabilized PE ($[\eta]$ (tetralin, 135°C) = 1.94; $d_{25} = 0.915 \text{ g/cm}^3$) was mixed with sulfur, repeatedly recrystallized from benzene, in the laboratory mixer for rubber at 110°C-120°C. 2 g of mixture was heated in an ampul with Ar atmosphere in the oil bath. Content of H_2S , free and bound S; amount of gel; unsaturation, maximum of swelling, and the weight increase during swelling were determined in the reaction product. Heating of PE with S at 200°C-250°C produces binding of S with hydrocarbon, separation of H_2S , increase of the double bonds, formation and gradual increase of chemical cross links between the

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Reaction of polyethylene with sulfur

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PE molecule chains. This causes gel formation. Cyclic structures are formed and small amounts of decomposition products of low molecular weight are separated. In the larger, rectilinear part of the kinetic curves for S addition, the absolute rate of reaction increases linearly with the initial S content. The relative rate: $S_{\text{bound}}/S_{\text{total}}$ is inversely proportional. With an S content $> 6\%$ in the polymer, it becomes constant at 230°C , independent of the initial S content. The maximum amount of S (31-37 %) of the initial content is independent of the reaction temperature. The temperature coefficient of S addition is 2.44, the activation energy 44.4 kcal/mole, and the pre-exponential factor in the Arrhenius equation $1.58 \cdot 10^{15} \text{ sec}^{-1}$, which corresponds to substitution reactions. The kinetic curves for the H_2S separation show a salient point which appears the quicker, the smaller the amount of bound S and the higher the reaction temperature. At a content of bound S $\leq 1.2\%$, no salient point occurs. Before the salient point the amount of separated H_2S is about equivalent to that of bound S. The ratio $\text{H}_2\text{S}/S_{\text{bound}}$ increases to ~ 2 towards the end of the reaction. H_2S develops, therefore, (!) because of

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Reaction of polyethylene with sulfur

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B110/B147

primary reactions of S and PE, and (2) on account of secondary reactions of the bound S. (2) occurs at sufficient concentration of the S-containing groups and higher temperatures. To verify this, a mixture with 7.74 % S was heated at 230°C for 2-3 hr. After removal of free S by means of acetone, further heating was conducted at 230°C in Ar atmosphere for 2-3 hr. H₂S separation occurred with an increase of cross links in the insoluble fraction. The maximum amount of separated H₂S amounts to ~2/3 of the initial S. Accumulation of the double bonds occurs at a constant rate, depending on temperature and S content in the mixture. For PE+7.74% S, $k_{230} = 4.64 \cdot 10^{-3} \text{ min}^{-1}$ (sulfur addition: $k_{230} = 4.16 \cdot 10^{-3}$). A linear dependence exists between unsaturation increase and S addition. The total number of double bonds at the end of the process is 5-7.5 % of the equivalent of separated H₂S. Gel formation increases with increasing reaction temperature and increasing initial S content, the maximum content of insoluble fraction, however, remains almost constant. It is reached at 0.6-0.7% of bound S. With increasing heating and S addition, the maximum of gel swelling in boiling toluene drops until termination of the

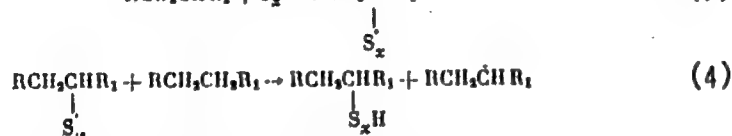
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B110/B147

Reaction of polyethylene with sulfur

S addition. A linear dependence exists between the maximum of swelling and the amount of bound S. The cross links probably develop owing to secondary regroupings of S bonds. The final concentration of cross links is $5.9-9.4 \cdot 10^{18}/\text{cm}^3$ (50-80 S atoms per cross link). Intramolecular S-containing cycles probably develop, or destruction processes occur. The structural changes are indicative of thermal destruction according to:

$S_8 \rightarrow S_8^{\cdot\cdot} \rightarrow S_x^{\cdot\cdot} + S_y^{\cdot\cdot}$. The bi-radicals separate H from methine- or methylene groups: $RCH_2CH_2R_1 + S_x^{\cdot\cdot} \rightarrow RCH_2\dot{C}HR_1 + HS_x^{\cdot}$. The following takes place:



The structuration reaction occurs according to

Card 4/6.

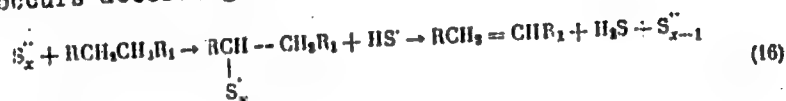
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B110/B147

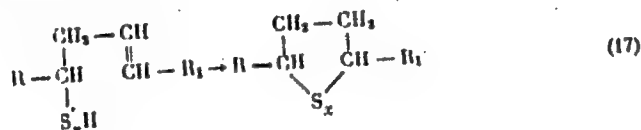
Reaction of polyethylene with sulfur



Double binding occurs according to



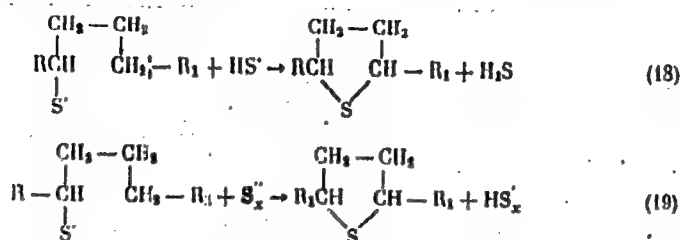
Ring formation proceeds according to



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Reaction of polyethylene with sulfur

29711
S/190/61/003/011/016/016
B110/B147



The authors thank A. V. Nikanorenkova for assistance with experiments. There are 7 figures and 11 references: 1 Soviet and 10 non-Soviet. The three most recent references to English-language publications read as follows: G. Gee, Trans. Faraday Soc., 48, 515, 1952; F. Fairbrother, G. Gee, T. Merril, J. Polymer Sci., 16, 459, 1955; D. M. Gardner, G. K. Fraenkel, J. Amer. Chem. Soc., 78, 3279, 1956.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov)

SUBMITTED: January 4, 1961

Card 6/6

S/190/63/005/001/005/020
B117/B186

AUTHORS: Dogadkin, B. A., Dontsov, I. A.

TITLE: Reaction of polyethylene with sulfur in the presence of mercapto benzothiazole and tetramethylthiuram disulfide

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 1, 1963, 39-43

TEXT: The effect of substances promoting the formation of active sulfur on the chemical kinetics in the system polyethylene (PE) / 4% sulfur was studied in the presence of 4.4% mercapto benzothiazole (MBT) or 2.5% tetramethylthiuram disulfide (TMTD). Results: Addition of sulfur proceeds at increased rate in the presence of MBT and TMTD; at the beginning of the reaction this process is more accelerated by TMTD than by MBT. Separation of hydrogen sulfide proceeds faster with MBT than with TMTD, and more sulfur is bound in the presence of TMTD than of MBT. The formation of gel, which starts either with or without accelerators in the presence of 0.32% bound sulfur, is intensified by the accelerators. The formation of gel is the faster, the stronger is the reaction of the accelerators with sulfur. The maximum quantity of gel is formed irrespective of the type of accelerator

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Reaction of polyethylene with ...

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B117/B186

or the experimental conditions with equal amounts of bound sulfur (0.6-0.75%). The maximum of swelling changes in the same way as in the reaction without accelerator, and remains unchanged after consumption of the free sulfur. Conclusion: MBT and TMTD with a 1:4 ratio of sulfur to polyethylene accelerate the principal processes taking place in this system. However, the kinetic curves the maximum amount of bound sulfur and the degree of crosslinking all retain, the same character as in reactions without accelerator. The accelerators investigated differ in behavior: MBT reacts with sulfur, which leads to increase in content of sulfur radicals. TMTD decomposes into radicals which not only activate the sulfur but also dehydrogenate the saturated polymer. There are 6 figures.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov)

SUBMITTED: July 14, 1961

Card 2/2

25338

15.8060 2209

S/020/61/138/006/014/019
B103/B215

AUTHORS: Dogadkin, B. A. and Dontsov, A. A.

TITLE: Interaction of polyethylene and sulfur

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 6, 1961, 1349-1352

TEXT: The authors studied the interaction of sulfur and high-pressure polyethylene (PE) at 200-250°C. On the basis of their results, this reaction is represented as a radical process in which the eight-membered sulfur cycle is dissociated such: $S_8 \rightleftharpoons \ddot{S}_8 \rightarrow \ddot{S}_x + \ddot{S}_y$ (1). The dissociation of sulfur into radicals is the initial and, simultaneously, the controlling stage. Sulfur biradicals separate hydrogen atoms from methine or methylene groups whereby polymeric and persulfhydryl radicals are formed:

$RCH_2CH_2R_1 + \ddot{S}_x \rightarrow RCH_2\dot{C}HR_1 + HS_x$ (2). The authors assume a subsequent sulfuration and dehydrogenation of the polymer molecules as follows:
 $RCH_2\dot{C}HR_1 + \ddot{S}_x \rightarrow RCH_2\dot{C}HR_1$ (3) $RCH_2\dot{C}HR_1 + RCH_2CH_2R_1 \rightarrow RCH_2\dot{C}HR_1 + RCH_2\dot{C}HR_1$ (4).

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B103/B215

Interaction of polyethylene and sulfur

They furthermore assume that polysulfide groups decompose in all stages of the reaction, and that radicals with a reduced number of sulfur atoms are liberated: $\ddot{S}_x \rightarrow \ddot{S}_y + \ddot{S}_z + \ddot{S}$ (5), $\dot{S}_x H \rightarrow \dot{S}_y H + \dot{S}_z H + \dot{S}H$ (6). During the interaction with PE, sulfur is added to PE, i.e., irrespective of the temperature in amounts of 31-37 % of the initial content. In the straight part of the kinetic curve, the reaction rate increases linearly with increasing initial sulfur content. The relative rate shows a reverse dependence. The process is expressed by the equation:
 $K = 1.58 \cdot 10^{15} e^{-44.4/RT}$. Hydrogen sulfide (H_2S) is liberated in the reaction. This process is of complicated kinetics. The authors assume that H_2S is formed by primary reactions between sulfur and PE, and also by secondary reactions in which the added sulfur takes part. The kinetic curves for the H_2S formation showed a sharp bend which forms at a given temperature and an equal amount of added sulfur, irrespective of its content in the initial mixture. H_2S is probably formed by the interaction of sulfhydryl radicals: $2\dot{S}_x H \rightarrow \ddot{S}_y + H_2S$ (7). Its accelerated liberation in the final

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Interaction of polyethylene and sulfur

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stage of the process is due to the reaction of sulfhydryl groups in the PE molecular chains. Besides this intermolecular reaction, intramolecular reactions without the participation of free sulfur may take place, as they are characteristic of the final stage of the process. The linear dependence of the number of cross-links on the sulfur content shows that the reactions for the formation of the new structures are mainly due to

sulfur: $\text{RSH} + \text{R}_1\text{SH} \rightarrow \text{RSR}_1 \rightarrow \text{H}_2\text{S}$ (11), $\text{RS}_x + \text{R}_1\text{S}_y \rightarrow \text{RS}_z\text{R}_1$ (12),

$\text{RS}_x + \text{R}_1 \rightarrow \text{RS}_x\text{R}_1$ (13). The increasing number of cross-links in a certain stage causes the formation of an insoluble fraction, namely, a gel. Its largest amount is obtained irrespective of the reaction temperature at low amounts (0.6-0.7 %) of bound sulfur, and remains unchanged during further sulfuration. However, the increase in the number of cross-links in the gel proceeds. There is a linear dependence between the swelling maximum (in boiling toluene) and the amount of bound sulfur. Hence, the authors conclude that the cross-linking of molecular chains is mainly due to sulfur-containing groups. After termination of this process, the concentration of cross-links is $5.9-9.4 \cdot 10^{18}/\text{cm}^3$, which means 50-80 sulfur

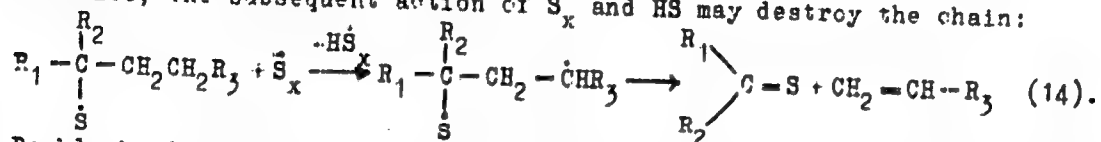
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B103/B215

Interaction of polyethylene and sulfur

atoms per cross-link. The authors explain this by a kind of destruction and a formation of intramolecular sulfur-containing cycles, and by other kinds of sulfur addition which do not cause cross-linking. In the primary polymer radical forms at the point of ramification of the PE molecule, the subsequent action of $\bar{S}_x$ and $H\bar{S}$ may destroy the chain:



Double bonds mainly form by destruction (14), but also by direct dehydrogenation with sulfur: $\bar{S}_x + RCH_2CH_2R_1 \xrightarrow{\bar{S}_x} RCHCH_2R_1 + H\bar{S} \longrightarrow RCH=CHR_1 + H_2S + \bar{S}_{x-1} \quad (15).$

They form at a constant rate. There exists a linear dependence between the amount of added sulfur and the number of resulting double bonds. At the end of the process, their number is only 5-7.5 % of the equivalent amount of liberated H_2S . Theoretically, the amount of H_2S should be equivalent to the sum of resulting cross-links, double bonds, and thion

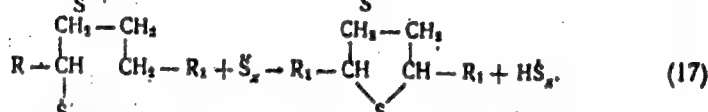
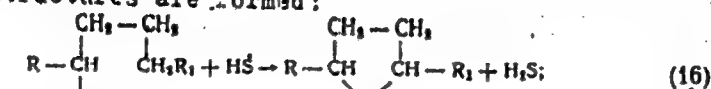
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Interaction of polyethylene and sulfur

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B103/B215

groups. H_2S/S , however, is approximately 2, and the sum is much smaller than the equivalent of H_2S . This leads to the assumption that intramolecular ring structures are formed:



Since the polymerization of sulfur sets in above 159°C , the authors assume that some polymer sulfur is contained in sulfurated PE. There are 4 figures and 4 non-Soviet-bloc references. The three references to English-language publications read as follows: W. Friedman (Ref. 2: Refiner and Natural Gasoline Manufacturer, 20, 395 (1941)); F. Faibrother et al. (Ref. 3: J. Polym. Sci., 16, 495 (1955)); D. M. Gardner, G. K. Fraenkel (Ref. 4: J. Am. Chem. Soc., 78, 3279 (1956))

Card 5/6

25338

Interaction of polyethylene and sulfur

S/020/61/138/006/014/019
B103/B215

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im.
M. V. Lomonosova (Moscow Institute of Fine Chemical
Technology imeni M. V. Lomonosov)

PRESENTED: January 28, 1961, by A. A. Balandin, Academician

SUBMITTED: January 26, 1961

Card 6/6

L 10762-65 EWT(m)/EWT(c)/EWT(j)/T Pc-4/Pr-4 EPL RM/IN/JFW

ACCESSION NR: AP4747195

S/0190/64/006/010/1744/1747

AUTHOR: Dogadkin, B. A.; Dvitsov, A. A.

TITLE: Effect of iodine, benzoic acid and dicumyl peroxide on the reaction between polyethylene and sulfur

SOURCE: Vyssokomolekulyarnyye soyedineniya, v. 6, no. 10, 1964, 1744-1747

TOPIC TAGS: polyethylene, sulfur, iodine, benzoic acid, dicumyl peroxide, crosslinking, hydrogen sulfide, polymer structuration

ABSTRACT: The kinetics of the addition of sulfur, evolution of hydrogen sulfide and formation of an insoluble fraction (gel) during the interaction of polyethylene with sulfur in the presence of benzoic acid, iodine or dicumyl peroxide were investigated at 230C. The rate of the reaction is not affected by benzoic acid, but is increased by the addition of iodine or dicumyl peroxide. The addition of sulfur is a first-order reaction, but the velocity constant increases from 0.00513 to 0.0127 min.⁻¹. The ratio between the amount of hydrogen sulfide evolved and the amount of bound sulfur at the end of the reaction is close to 2, but the maximum amount of gel, as in mixtures without iodine, is obtained at 0.6-0.7% bound sulfur. On the basis of the experimental data, it is concluded that in solutions

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ACCESSION NR: AF4047195

2.
of sulfur in polyethylene, as well as in a sulfur melt, the cyclic sulfur S_8 molecules dissociate into radicals and the sulfur reacts with polyethylene according to the radical mechanism. The addition of sulfur results not only in structuration, but also in the destruction of the structured (cross-linked) polymer. These processes can be explained by the reaction of the elemental sulfur with crosslinks containing a tertiary carbon atom. Orig. art. has: 4 figures.

ASSOCIATION: Moskovskiy Institut tonkoy khimicheskoy tekhnologii Im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 19 Nov 65

ENCL: 00

SUB CODE: 00

NO REF SOV: 004

OTHER: 006

... evolution of hydrogen sulfide ...
... during the interaction of polyethylene with sulfur in the presence of ...
... iodine or organic peroxide ...
... the rate of the reaction is not affected by ...
... by the addition of ...
... first-order reaction, but ...
... The ratio between the amount of hydrogen sulfide evolved and ...
... of bound sulfur at the end of the reaction is close to 2, but ...
... In mixtures of ...
... is obtained at 0.6-0.7% bound ...
Card 14/2. On the basis of the experimental data, it is concluded that in sulfur

1. 26103-65 EPF(c)/EWI(j)/EWT(a) Pc-4/Pr-4 RM
ACCESSION NR: AP4047196 8/0100/64/006/010/1748/1754

AUTHOR: Dontsov, A. A.; Shevchenko, Ye. A.; Novitskaya, S. P.; Dogadkin, B. A.

TITLE Reaction of polyethylene with dibenzothiazyl disulfide

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 10, 1964, 1748-1754

TOPIC TAGS: polyethylene, vulcanization, disulfide vulcanizing agent, dibenzothiazyl disulfide, polymer structuration

ABSTRACT: The kinetics of the reaction between polyethylene and dibenzothiazyl disulfide (DBTD) were investigated at temperatures of 190-220°C and accelerator concentrations of 3.1-18.8 parts per 100 parts of polyethylene. The reaction was carried out either in sealed ampoules filled with nitrogen or in a press, and was followed by measuring the decomposition of DBTD, the formation of mercaptobenzothiazol and hydrogen sulfide, the addition of S to the polymer and the formation of an insoluble gel. The results showed that DBTD is converted to mercaptobenzothiazol and degradation products, and that the addition of increasing amounts of DBTD increases the decomposition of DBTD from a first- to a second-order reaction, decreases the relative amounts of bound S and mercaptobenzothiazol, and increases the amounts of degradation products. Mercaptobenzothiazol formation, however, always remains a first-order reaction. The addition of S proceeds through

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L 26103-65

ACCESSION NR: AP4047186

a maximum in all cases, the ascending curve being a first-order process, and the rate constants of the addition of S and formation of mercaptobenzothiazol are about equal. At DBTD concentrations less than 5%, there is no gel formation; gel formation increases with increasing amounts of DBTD in the mixture, but is unaffected by temperature. Basically, the gel is formed by the dissociation of DBTD radicals connected with the polymer. A mechanism is proposed to explain these reactions, in which the accelerator first adds to the polymer. In mixtures with small amounts of DBTD, these products are stable and structural change does not take place. At high accelerator concentrations, labile addition products are formed which are capable of thermal dissociation, causing cross-linkage. Orig. art. has: 4 figures, 1 table and 10 equations.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow fine chemical technology institute)

SUBMITTED: 10 Nov 63

ENCL: 00

SUB CODE: OC, GC

NO REF SCV: 005

OTHER: 002

Card 2/2

L 64547-65 ENT(m)/EPF(c)/CWP(j)/T RM

ACCESSION NR: AP5023221

UR/0190/01/006/011/2015/2022

AUTHOR: Dentsov, A. A.; ⁶⁶ (Mavichenko, Ye. A.); ⁶⁶ Novitskaya, S. P.; ⁵⁵ Dogadkin, B. A. ⁶⁵TITLE: Interaction of polyethylene ⁶⁶ with sulfur in the presence of dibenzothiazyl ⁵⁵ disulfide (Altax)SOURCE: Vysokomolekulyarnyye soedineniya, v. 6, no. 11, 1964, 2015-2022 ²⁷
²⁵TOPIC TAGS: polyethylene plastic, sulfur, chemical reaction, polymer, organic ^B
sulfur compound

ABSTRACT: The article is the fifth communication from the series "Interaction of Polyethylene with Sulfur." The kinetics of the reaction of polyethylene with sulfur in the presence of Altax dibenzothiazyl disulfide at 190-200° was investigated. In the course of the reaction, Altax decomposes, mercaptobenzothiazole is formed, sulfur is added to polyethylene, and the bulk of the polymer is converted to an insoluble product. The Altax consumption, mercaptobenzothiazole formation, and addition of sulfur obey first-order equations. The rate constants of mercaptobenzothiazole formation and sulfur addition are approximately equal (30 kcal/mole), but smaller than the rate of constant of

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L 64547-65

ACCESSION NR: AP5023221

the consumption of Altax (20.8 kcal/mole). Gel formation occurs chiefly after the Altax consumption; it is accompanied by the formation of mercaptobenzothiazole and the addition of sulfur and ends when limiting amounts of mercaptobenzothiazole and bound sulfur are reached. When the Altax content is increased, the limiting amount of the gel increases. Gel formation is accelerated by elevation of the temperature, but the final quantity of the gel remains unchanged. The authors conclude that in the presence of sulfur, no appreciable induced decomposition of Altax takes place; the participation of Altax in reactions of dehydrogenation of the polymer increases, as does the sulfide content of the intermediate compounds of the polymer and accelerator, arising at the first stage of the reaction. As a result, both the efficiency and the rate of structuration increase when sulfur is incorporated into the polyethylene-Altax mixture. Orig. art. has: 13 formulas, 6 graphs, 2 tables.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 22 Jun 64

ENCL: 00

SUB CODE: 00, 00

NR RKF SOV: 006

OTHER: 102

JPRS

mlh
Card 2/2

L 64548-65

EWI(m)/EPF(c)/EWP(j)/T

UR/0190/64/006/011/2023/2029

ACCESSION NR: AP5023222

AUTHOR: Dontsov, A. A.; Nikanorenkova, A. V.; Dogadkin, B. A.

TITLE: Investigation of the reaction of polyethylene with sulfur in the presence of mercaptobenzothiazole and zinc oxide

SOURCE: Vyshemolekulyarnyye soedineniya, v. 6, no. 11, 1964, 2023-2029

TOPIC TAGS: polyethylene plastic, sulfur, chemical reaction, polymer, organic sulfur compound, zinc oxide

ABSTRACT: This article represents the sixth communication from the series "Interaction of Polyethylene with Sulfur." The kinetics of the reaction of polyethylene with sulfur was investigated in the presence of zinc oxide without additives, in conjunction with stearic acid, mercaptobenzothiazole, or its zinc salt (zinc benzothiazylmercaptide). Without additives, in polyethylene medium at 230°, zinc oxide does not react either with sulfur or with hydrogen sulfide. In the presence of stearic acid, zinc oxide is converted to zinc stearate, which reacts with sulfur, forming zinc sulfide at the initial stages of the reaction. The surplus elemental sulfur reacts with polyethylene in the usual way. In a mixture of polyethylene, sulfur, mercaptobenzothiazole,

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L 64548-65

ACCESSION NR: P5023222

and zinc oxide at 220°, the reaction proceeds differently, depending on the ratio of zinc oxide to mercaptobenzothiazole. When the zinc oxide content does not exceed that needed for converting the added mercaptobenzothiazole to the zinc mercaptide, it exerts no appreciable effect on the reactions that occur in the system. In the presence of excess zinc oxide, both the efficiency and the rates of the reactions and structuration process increase. Zinc benzothiazylmercaptide exerts the same effect on the reaction of polyethylene with sulfur as a combination of mercaptobenzothiazole and zinc oxide. In a mixture of polyethylene, sulfur, mercaptobenzothiazole, and zinc oxide, the most rapid reaction is that of zinc oxide with the accelerator, sulfur then reacting with the zinc mercaptide, forming zinc sulfide, and apparently radicals of the mercaptobenzothiazole accelerator, which, in contrast to mercaptobenzothiazole, are capable not only of cleaving the cyclic sulfur molecules into radicals, but also of dehydrogenating the polymer molecules. Orig. art. has: 5 graphs, 3 tables, 3 formulas. 55

ASSOCIATION: Moskovskiy institut tekhnicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 22 Jan 64

ENCL: 00

SUB CODE: 00, 00

NR REF SOV: 006

OTHER: 005

JPRS

Card 2/2 77/11

DOGADKIN, B.A.; DONTSOV, A.A.

Structure-forming and degradation processes in the interaction
of polyethylene with sulfur. Vysokom. soed. 7 no.11:1841-1847
N '65. (MIRA 19:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii. Sub-
mitted November 16, 1964.

L 62834-65 ~~ENT(m)/EPF(c)/SWP(j)~~ ~~Pc-1/Pr-1~~ JAJ/RM
 ACCESSION NR: AFB019042
 UR/0286/65/000/012/0074/0074
 678.0411.4
 678.742.3 27

AUTHOR: Dontsov, A. A.; Farka, P.; Yermilova, G. A.; Dogadkin, B. A.

TITLE: A method for stabilizing isotactic polypropylene. (Class 39, No. 172034)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 74

TOPIC TAGS: synthetic rubber, polypropylene, polymer

ABSTRACT: This Author's Certificate introduces a method for stabilizing isotactic polypropylene by using sulfur-containing stabilizers. The process is made more effective by using the products of interaction of atactic polypropylene with Altax.

ASSOCIATION: none

SUBMITTED: 07Jul64

ENCL: 00

SUB CODE: MT, G-C

NO REF SOV: 000

OTHER: 000

282.
 Card 1/1

L 20377-66 ENT(m)/EWP(j)/T RM

ACC NR: AP6C06543

(A)

SOURCE CODE: UR/0191/65/000/011/0028/0031

35

AUTHORS: Dortsov, A. A.; Farka, P.; Yermilova, G. A.; Dogadkin, B. A.

B

ORG: none

TITLE: Investigation of reaction products from the reaction of atactic polypropylene with sulfur and dibenzothiazyl disulfide as potential polymer stabilizers

15

SOURCE: Plasticheskiye massy, no. 11, 1965, 28-31

TOPIC TAGS: polypropylene, polymer, oxidation inhibition, sulfur, chemical stability

ABSTRACT: It was the object of this investigation to synthesize high-molecular-weight stabilizers by the interaction of atactic polypropylene (APP) with sulfur or dibenzothiazyl disulfide (DBTD) and to study their inhibiting ability in the thermooxidative destruction of polymers. The kinetics of the addition of sulfur and (DBTD) to (APP) were studied (see Fig. 1), and the inhibiting action of the synthesized compounds on the thermooxidative destruction of (APP) was determined. The induction periods for oxidation were determined after Yu. A. Shlyapnikov, V. B. Miller, M. B. Neyman, Ye. S. Torsuyeva, and B. A. Grcmov (Vysokomolek. soyed.

Card 1/2

UDC: 678.048

2

20377-66

ACC NR: AP60X6543

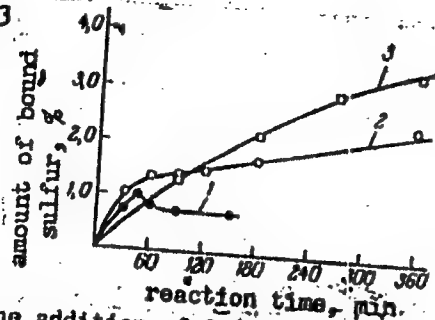


Fig. 1. Kinetics of the addition of DBTD to APP at 200C (1) and sulfur to APP at 230C in mixtures containing 6 wt parts of sulfur (2) and 10 wt parts of sulfur (3).

2, 1409, 1960). The addition of 2,6-di-tert-butyl-4-methylphenol (ionol) to the product of the interaction of (APP) with sulfur was also determined, and the experimental results are presented graphically. It was found that the inhibiting activity of the interaction products of (APP) with sulfur and (DBTD) depends on the extent of reaction, the initial products being more active than the final products. The inhibitors are equal in their inhibiting activity to the inhibitor phosphite P-24. Addition of ionol to the mixture of interaction products of (APP) with sulfur yields an inhibitor of enhanced antioxidant properties (correlated action). Orig. art. has: 1 table and 8 graphs.

SUB CODE: 0711/

SUBM DATE: none/

ORIG REF: 005/

OTH REF: 002

Card 2/2

vmb

L 27338-66 EWT(m)/EWP(j)/I/ETC(m)-6 IJP(c) RM/WW

ACC NR: AP60J8960

SOURCE CODE: UR/0190/65/007/011/1841/1847

AUTHORS: Dogadkin, B. A.; Dontsov, A. A.

ORG: Moscow Institute of Fine Chemical Technology (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Vulcanization and degradation processes occurring during reaction of polyethylene with sulfur

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1841-1847

TOPIC TAGS: vulcanization, polyethylene plastic, reaction mechanism

ABSTRACT: The relationship between vulcanization and degradation processes at various stages of reaction of polyethylene (I) with sulfur (II) has been investigated by measuring the degree of swelling of the reaction products in boiling toluene. The reaction and measurements were conducted by the methods described earlier by B. A. Dogadkin and A. A. Dontsov (Vysokomolek. soyed., 3, 1746, 1961; Kolloidn. zh., 23, 346, 1961). It was established that both processes, occurring without additives as well as in the presence of dicumene peroxide at 190--230C (as illustrated in Fig. 1), result from the reaction of I with II. Vulcanization takes

UDC: 678.01:54+678.742

Card 1/2

L 27338-66

AGC NR: AP6008960

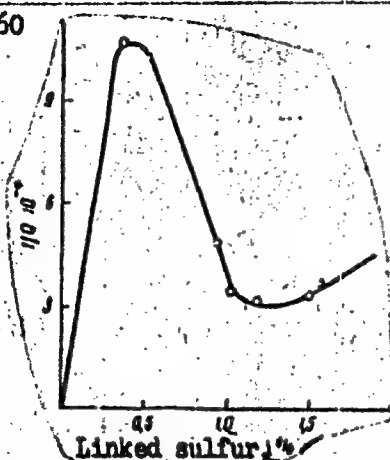


Fig. 1. Degree of vulcanization as a function of the amount of sulfur fixed during the reaction of polyethylene with sulfur (5 parts by weight) and dicumene peroxide (3 parts by weight) at 230C. $1/Q$ - reciprocal of the swelling maximum.

place by interaction of biradicals of II with unchanged molecules of I, while degradation occurs during reaction of II with adjacent methine groups. A mechanism for the latter process is offered. The role of II in vulcanization reversion phenomena occurring in unsaturated elastomers is discussed in general terms. Orig. art. has: 5 figures and 12 equations.

SUB CODE: 17/ SUBM DATE: 16Nov64/ ORIG REF: 006/ OTH REF: 001

Card 2/2

L 10336-67 EWP(j)/EWT(m) IJP(c) RM

ACC NR: AP6079909

(A)

SOURCE CODE: UR/0413/66/000/015/0086/0086

AUTHORS: Dontsov, A. A.; Farka, P. I.; Logunova, R. A.; Yermilova, G. A.; Dogadkin, B. A. 29

ORG: none

TITLE: A method for protecting polyolefins against zonal aging by heat and light. Class 39, No. 64428/announced by Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 86

TOPIC TAGS: carbon black, polyolefin, light aging, polypropylene plastic

ABSTRACT: This Author Certificate presents a method for protecting polyolefins against zonal aging by heat and light as described in Author Certificate No. 172033. To increase the stabilizing activity in the case of aging by heat and light, sulfidized polypropylene is applied together with carbon black.

SUB CODE: 11/ SUBM DATE: 16Jul65

Card 1/1 ml

UDC: 670.74.040.4:670.742.3:6.046.2

L 10338-07 EWT(11)/EWT(m) LJP(1) RM/WM

ACC NR: AP6029912

(A)

SOURCE CODE: UR/0413/66/000/015/0087/0087

AUTHORS: Dontsov, A. A.; Farka, P. (Czech. Soc. Rep.); Kagan, G. M.; Yermilova, G. A.; Dogadkin, B. A.

ORG: none

53

TITLE: A method of protecting polyolefins against destruction by heat and acids. Class 39, No. 18.433 (announced by Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov Moskovskiy institut tonkoy khimicheskoy tekhnologii)

SOURCE: Izotret prom obraz tov zn, no. 15, 1966, 87

TOPIC TAGS: polyolefin, heat resistance, antioxidant additive

ABSTRACT: This Author Certificate presents a method for protecting polyolefins against destruction by heat and acids by introducing into them a polymer sulfur-containing antioxidant. To increase the effectiveness of the stabilization, a sulfidized polystyrol is employed as the sulfur-containing antioxidant.

SUB CODE: 07/ SUBM DATE: 16Jul65

Card 1/2 ml.

UDC: 678.74.048.4:678.746.22'6

ACC NR: AP7001406

SOURCE CODE: UR/0413/66/000/021/0108/0109

INVENTOR: Dontsov, A. A.; Mikhlin, V. E.; Dogadkin, B. A.

ORG: none

TITLE: A method for vulcanizing synthetic rubbers. Class 39, No. 187995 [announced by Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tehnologii)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 108-109

TOPIC TAGS: synthetic rubber, ~~synthetic rubber~~ vulcanization, carboxylate *acid*,
~~monovalent metal carboxylate~~

ABSTRACT: An Author Certificate has been issued for a method for vulcanizing synthetic rubbers with organic acid derivatives in the presence of radical-type activators. To improve the technological properties of rubber mixtures, salts of monovalent metals of unsaturated carboxylic acids are used as the organic acid derivatives. [B0]

SUB CODE: 11, 07/ SUBM DATE: 16Jul65/ ATD PRESS: 5109

Card 1/1

UDC: 678.7.028.294:547.39-38

DOMTSOV, A.I., insh.

Slinging bar hoists. Resep. truda v prom. 1 no.12:31 D '57:
(MIRA 12:3)

(Mine hoisting)

DONTSOV, A.I.

Mechanized casing of inclined boreholes. Podzem. gaz. ugl. no.1:66-67
'59. (MIRA 12:6)

1. Kontora opytnogo napravlennoy bureniya Lisichanskoy stantsii
"Podzemgaz."

(Boring) (Coal gasification, Underground--Equipment and supplies)

DONTSCV, A.Ya., otv.sa vypusk; KHITROV, P.A., tekhn.red.

[Handbook on wages and classifications of workers employed on railroads and in industrial transportation enterprises] Tarifno-kvalifikatsionnyi spravochnik rabochikh promyshlennykh i ekspluatatsionnykh predpriatii zheleznodorozhnogo transporta. Moskva, Gos.transp. zhel-dor.izd-vo. Pt.1. [Occupations and skills of workers employed in railroad operational activities and in industrial transportation (railroad) sections] Professii i spetsial'nosti rabochikh, zaniatykh v ekspluatatsionnoi deiatel'nosti zheleznykh dorog i v transportnykh (zheleznodorozhnykh) tsakhakh promyshlennykh predpriatii. (MIRA 13:3)
1959. 42 p.

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya.
(Railroads---Employees)

OZEROV, Fedor Ivanovich; SHAYKEVICH, M.D., inzh., restsenzent; DONTSOV,
A.Ya., inzh., red.

[Planning, norm setting and accounting for loading and unloading
operations] Planirovanie, normirovanie i uchët pogrúzozhno-
razgrúzochnykh rabot. Moskva, Vses.izdatel'sko-poligr. ob'edi-
nenie M-va putei soobshchenia, 1961. 87 p. (MIRA 14:12)
(Loading and unloading) (Railroads--Freight)

KULAGIN, Nikolay Nikolayevich; DUDAYEV, Pavel Ivanovich; KON'KOV,
P.S., retsenzents; DONTSOV, A.Ya., retsenzents; KOLTUNOVA,
M.P., red.; ~~VOROTNIKOVA~~, L.F., tekhn. red.

[Production norms in railroad transportation] Normirovanie
truda na zheleznodorozhnom transporte. Moskva, Transzhel-
dorizdat, 1962. 214 p. (MIRA 15:11)
(Railroads—Production standards)

KON'KOV, P.S., , kand. tekhn.nauk, dots.; DONTSOV, A.Ya., inzh.;
YURCHENKO, I.F., inzh.; ANGELBYKO, V.I., retsenzent;
BABENKO, V.I., retsenzent; ZAPREZVSKIY, G.S., retsenzent;
KRIMNUS, G.Kh., retsenzent; MANIN, I.I., retsenzent;
NAUMOV, G.K., retsenzent; TOLSTOSHEY, A.N., retsenzent;
TUCHKEVICH, T.M., retsenzent; FEDORETS, V.M., retsenzent;
FEL'DMAN, M.F., retsenzent; FRANKOV, N.Ya., retsenzent;
USENKO, L.A., tekhn. red.

[Establishing work norms in railroad transportation] Tekh-
nicheskoe normirovanie truda na shelesnodorozhnom transporte.
Moskva, Transzheldorizdat, 1963. 366 p. (MIRA 16:9)
(Railroads—Production standards)

DONTSOV, A.Ya., YELISEYEV, A.I.

Consolidated norms for maneuvering operations. Zhel. dor. transp.
47 no.1:71-73 Ja '65. (MIRA 18:3)

1. Nachal'nik otдела tekhnicheskogo normirovaniya truda Upravleniya truda, zarabotnoy platy i tekhniki bezopasnosti Ministerstva putey soobshcheniya (for Dontsov). 2. Starshiy inzh. otдела tekhnicheskogo normirovaniya truda Upravleniya truda, zarabotnoy platy i tekhniki bezopasnosti Ministerstva putey soobshcheniya (for Yeliseyev).

DONTSOV, F.P., student; STREKALEV, A.A., student

Quality of condenser roving, performance and control of the
condenser. Tekst.prom.22 no.3:49-52 Mr '62. (MIRA 15:3)

1. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy Promshlennosti.
(Carding machines)